

Claims

[c1] What is claimed is:

1. An FM demodulator comprising:

a differential output demodulator for receiving an FM signal, and for outputting a positive differential signal and a negative differential signal of a demodulated signal of the FM signal;

a DC offset detector electrically connected to the differential output demodulator, the DC offset detector comprising:

a first peak detector for measuring a peak signal of the positive differential signal;

a second peak detector for measuring a peak signal of the negative differential signal; and

a calculation circuit connected to the first peak detector and the second peak detector for generating a DC offset signal according to the peak signals measured by the first peak detector and the second peak detector; and

a correction circuit electrically connected to the differential output demodulator and the DC offset detector to compensate for the demodulated signal according to the DC offset signal generated by the calculation circuit.

- [c2] 2.The FM demodulator of claim 1 wherein peak measurements of the positive differential signal and the negative differential signal are inphase.
- [c3] 3.The FM demodulator of claim 1 wherein the calculation circuit is a subtraction circuit, and the DC offset signal is a differential offset signal.
- [c4] 4.The FM demodulator of claim 1 wherein the DC offset signal is a single ended offset signal.
- [c5] 5.The FM demodulator of claim 4 wherein the calculation circuit comprises:
a subtraction circuit for subtracting the peak signal generated by the second peak detector from the peak signal generated by the first peak detector; and
a dividing circuit connected to the subtraction circuit for obtaining the DC offset signal by dividing an output signal of the subtraction circuit by two.
- [c6] 6.The FM demodulator of claim 4 wherein the calculation circuit comprises:
an addition circuit for adding the peak signal of the first peak detector and the peak signal of the second peak signal together;
a dividing circuit connected to the addition circuit for dividing an output signal of the addition circuit by two;

and

a subtraction circuit connected to the dividing circuit to subtract an output signal of the dividing circuit from the peak signal of the first peak detector for obtaining the DC offset signal.

- [c7] 7. The FM demodulator of claim 1 further comprising a received signal strength indicator (RSSI) electrically connected to the DC offset detector for switching on and switching off the DC offset detector depending on the strength of the received FM signal.